# OPTICAL COMPUTED TOMOGRAPHY IN A TURBID MEDIA

## ABSTRACT OF THE DISCLOSURE

Photon migration methods are employed to image absorbing objects embedded in a turbid medium such as tissue. For improved resolution, early arriving photons are detected to provide data with image reconstruction based on optical computed tomography (CT). The CT method is generalized to take into account the distributions of photon paths. A point spread function (PSF) is expressed in terms of the Green's function for the transport equation. This PSF provides weighting functions for use in a generalized series expansion method. Measurements of turbid medium with scattering and absorption properties included coaxial transmission scans collected in two projections. Blurring associated with multiple scattering was removed and high-resolution images can be obtained.